National Chronic Kidney Disease Fact Sheet, 2014

Chronic kidney disease (CKD) is a condition in which your kidneys are damaged and cannot filter blood as well as healthy kidneys. Because of this, wastes from the blood remain in the body and may cause other health problems.

People with early CKD tend not to feel ill or notice any symptoms. The only way to find out for sure whether you have CKD is through specific blood and urine tests. Once detected, CKD can be treated with medicines and lifestyle changes, including making healthier choices about what you eat and drink. These treatments usually decrease the rate at which CKD worsens, and can prevent additional health problems.

- Without treatment, your diseased kidneys may stop working after a time, a condition called kidney failure.
- Once your kidneys fail, you either have to have regular dialysis, in which a machine filters your blood like healthy kidneys would, or have a kidney transplant.

CKD is common among adults in the United States

We estimate that more than 10% of adults in the United States—more than 20 million people—may have CKD, of varying levels of seriousness. Your chances of having CKD increase with age; it increases after age 50 years and is most common among adults older than 70 years.

Risk factors for developing CKD

Adults with diabetes or high blood pressure, or both have a higher risk of developing CKD than those without these diseases. Approximately 1 of 3 adults with diabetes and 1 of 5 adults with high blood pressure has CKD. Other risk factors for CKD include cardiovascular disease, obesity, high cholesterol, lupus, and a family history of CKD. Your risk of developing CKD also increases with age, as these risk factors are more common at older age. Men with CKD are 50% more likely than women to have kidney failure.

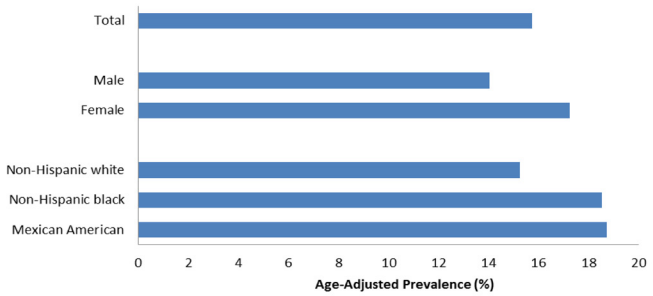
Health problems caused and affected by CKD

If you have diabetes or high blood pressure, and are diagnosed with CKD, it is very important to keep your blood sugar and blood pressure under control (your doctor will tell you what 'in control' is for you) so that your kidneys do not fail. Also, if your kidneys are damaged by other things, such as by infection or by drugs or toxins, it is more likely that CKD will lead to kidney failure, especially in older adults.

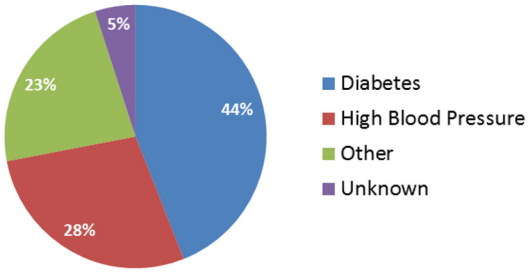
Kidney failure

When your kidneys stop working waste can no longer be removed from your blood, meaning you have kidney failure. Kidney failure is also called end-stage renal disease (ESRD) or Stage 5 CKD. (*Renal* is a medical term for kidney, meaning "having to do with the kidneys.") When you have ESRD you need dialysis or a kidney transplant to survive.

Age-Adjusted Prevalence of Chronic Kidney Disease Among US Adults Aged 20 Years and Older, 1999-2010



New Cases of Kidney Failure by Primary Diagnosis-2011, United States Renal Data System



We estimate that more than 10% of adults in the United States—more than 20 million people—may have CKD.

National Center for Chronic Disease Prevention and Health Promotion
Division of Diabetes Translation

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Some facts about kidney failure

- In 2011, 113,136 patients in the United States started treatment for ESRD.
- Diabetes and hypertension are the leading causes of ESRD. In 2011, diabetes or hypertension was listed as the primary cause for 7 of 10 new cases of ESRD in the United States.
- ESRD is more common among adults over 70 years of age.
- African Americans are about three and a half times more likely to develop ESRD than whites.
- Hispanics are about one and a half times more likely to develop ESRD than non-Hispanics.
- The number of new cases of ESRD in people with diabetes or high blood pressure declined by about 2 percent in 2011 compared with 2010—the first decrease in more than 30 years—which may mean that people with those diseases are getting better treatments.

Cardiovascular disease

Having kidney disease increases your chances of also having cardiovascular disease, heart attacks, and strokes. Keeping your blood pressure, blood sugar, and cholesterol—all risk factors for cardiovascular disease—at normal levels is more difficult, but much more important if you have CKD.

Other health-related consequences of CKD

CKD can also lead to other health problems including the following:

- Your body can hold in too much fluid, which could lead to swelling in your arms and legs, high blood pressure, or fluid in your lungs (called pulmonary edema). You can also develop pericarditis, which is an inflammation of the sac-like membrane (called the pericardium) around your heart.
- The potassium levels in your blood can go up suddenly (this is called hyperkalemia), which could keep your heart from working as it should. It can even lead to death.
- Your bones may become weak and brittle and possibly more likely to break.
- The number of red blood cells can become low, making you feel tired and weak. (This is called anemia.)
- Your immune system can become weakened, which makes you more likely to get an infection.
- You may become depressed or have a lower quality of life.
- You can become malnourished.

Risk of dying

Premature death from all causes and from cardiovascular disease is higher in adults with CKD than in adults without CKD. In fact, individuals with CKD are 16 to 40 times more likely to die than to reach ESRD.

What can be done to reduce CKD and prevent or delay kidney failure in the United States?

- Federal and state governmental agencies and various national organizations have developed thorough plans to handle the number of new and existing cases of kidney disease in the United States.
- Seeing a kidney doctor (called a nephrologist) has also been shown to improve kidney function or delay kidney failure.
- We have learned that the most efficient way to reduce personal suffering and financial costs of CKD is to prevent and treat its risk factors so that a person does not get the disease at all.
- Screening individuals at high risk for CKD—those older than 50 years; those with a history of diabetes, hypertension, or cardiovascular disease; and those with a family history of CKD, among others—may prevent or delay CKD and ESRD. In those who already have CKD, proper treatment can slow down how quickly the disease progresses and minimize complications.

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Acknowledgments

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- Agency for Healthcare Research and Quality http://www.ahrq.gov/
- American Kidney Fund http://www.kidneyfund.org/
- Centers for Disease Control and Prevention http://www.cdc.gov/diabetes
- Centers for Medicare and Medicaid Services http://cms.hhs.gov
- US Department of Veterans Affairs http://www.va.gov/health/
- Food and Drug Administration http://www.fda.gov
- Health Resources and Services Administration http://www.hrsa.gov
- Kidney Disease Interagency Coordinating Committee http://nkdep.nih.gov/about/kicc/index.htm
- National Institute of Diabetes and Digestive and Kidney Diseases of the National Institutes of Health http://www.niddk.nih.gov
- National Kidney Disease Education Program http://www.nkdep.nih.gov/
- National Heart Lung and Blood Institute of the National Institutes of Health http://www.nhlbi.nih.gov/
- American Society of Nephrology http://www.asn-online.org/
- National Kidney Foundation http://www.kidney.org/
- United States Renal Data System (USRDS) http://www.usrds.org/
- The University of Michigan Kidney Epidemiology and Cost Center (UM-KECC) http://www.sph.umich.edu/kecc/
- University of California San Francisco and University of California, San Francisco Center for Vulnerable Populations http://www.ucsf.edu/

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